Message Delivery Matrix

In distance education settings, all subject-matter content and instructional strategies are communicated through messages that are formatted as text, graphics, audio, and video. Consequently, the evaluation of any distance education technology, including IP video technologies, can begin by investigating how well it facilitates the following:

- One and/or two-way communication of all message formats.
- Immediate (synchronous) and/or delayed (asynchronous) communication.
- Instructor-to-student interactions and/or student-to-student interactions.
- One-to-one, one-to-many, many-to-one, and many-to-many interactions.

These top four criteria form the basic delivery options used in distance education settings. The following additional criteria can be used to further evaluate the usefulness of the technologies.

- Authoring and editing of messages, including the creation and editing of message content or adding to the content by overlaying additional messages (e.g. electronic pen to draw over the top of graphics or highlight important text).
- Recording or saving the messages in analog or digital formats, as well as saving the messages as a single combined channel or as multiple channels that can be separated.
- Using a variety of digital file formats.
- Storage of the messages internally (e.g. hard drive) or externally (e.g. floppy disk).
- Transferring messages securely.
- Insuring the privacy of personal messages and information.
- Transferring messages between technologies by importing and exporting files.
- Using interface controls to manage message selection and sequencing, as well as the quality of delivery. Controls may be used by instructor, students, and technical support personnel, or they may be internally managed by a computer program (e.g. sound level control to eliminate feedback).

Since distance education technologies depend upon some type of network to deliver message signals, it is also important to consider elements relating to the network speed and capacity. Some technologies use different networks to deliver different message formats (e.g. video delivered over satellite and audio delivered over phone lines). In addition, some technologies send the message formats in separate packages over the same network (e.g. video and sound sent as separate packets over the internet). The speed and capacity related to delivery networks are key factors in determining whether or not a distance education technology can be used. The control or management of the network also should be considered, as certain technologies may need to be managed closely to maintain network functionality. If a technology promises to be able to deliver every possible message delivery combination (criteria 1-4), but in the process clogs up the delivery network, it cannot considered to be a useful technology.

Consequently, evaluation of any technology should be accompanied by an evaluation of the networks through which the messages will be delivered.
Message Delivery Matrix

- **Product:**
- **Unit cost:**
- **Basic criteria**

	Text	**Graphics**	**Audio**	**Video**
Direction				
One-way				
Two-way				
Timing				
Synchronous				
Asynchronous				
Instructor-to-student				
One-to-one				
One-to-many				
Many-to-one				
Many-to-many				
Student-to-student				
One-to-one				
One-to-many				
Many-to-one				
Many-to-many				

Additional criteria

Authoring / editing tools				
Create content				
Edit content				
Add to content				
Recording				
Analog				
Digital				
Single channel				
Multiple channels				
Digital File formats				
Standardized				
Proprietary				
Storage				
Internal				
External				
Security				
Secure				
Non-secure				
Privacy				
Private				
Public				
File transfer / sharing				
Import				
Export				
Interface Controls				
Instructor				
Learner				
Technical support personnel				
Computer programmed				